PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project

Protect And Restore Mill Creek Watershed

BPA project number: 20087
Contract renewal date (mm/yyyy): ☐ **Multiple actions?**

Business name of agency, institution or organization requesting funding
Nez Perce Tribe Fisheries/Watershed Program

Business acronym (if appropriate) NPT

Proposal contact person or principal investigator:

Name	Heidi Stubbers
Mailing Address	P.O. Box 365
City, ST Zip	Lapwai, Idaho 83540
Phone	(208)843-7406
Fax	(208)843-7310
Email address	heidis@nezperce.org

NPPC Program Measure Number(s) which this project addresses
2.2C; 7.1; 7.6; 7.6A.1-2; 7.6B1-6; 7.6C.2; 7.6C.5; 7.6D; 7.7; 7.7A.1; 7.7A.4; 7.8A.1-6

FWS/NMFS Biological Opinion Number(s) which this project addresses
Land and Resource Management Plans for National Forests and Bureau of Land Management Resource Areas in the Upper Columbia River Basin and Snake River Basin Evolutionary Significant Units, 1998.

Other planning document references
Columbia River Basin Fish and Wildlife Program; Wy-Kan-Ush-Mi Wa-Kish-Wit, Spirit of the Salmon, The Columbia River Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs, and Yakama Tribes; Clearwater River Subbasin Salmon and Steelhead Production Plan; South Fork Clearwater River Landscape Assessment

Short description
Protect and enhance critical riparian areas of the Mill Creek Watershed to provide quality habitat for Chinook salmon, Steelhead trout, Bull trout, and resident fish by working with an overall watershed approach.

Target species
Chinook salmon, Steelhead trout, Bull trout, and Westslope Cutthroat trout.

Section 2. Sorting and evaluation

Subbasin
Clearwater subbasin - South Fork Clearwater River subbasin

Evaluation Process Sort

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
☒ Anadromous fish ☐ Resident fish ☐ Wildlife	☐ Multi-year (milestone-based evaluation) ☒ Watershed project evaluation	☐ Watershed councils/model watersheds ☐ Information dissemination ☐ Operation & maintenance ☒ New construction ☐ Research & monitoring ☒ Implementation & management ☐ Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship
8335000	Nez Perce Tribal Hatchery	Supplemetation
9608600	Clearwater Focus Coordinator Idaho Soil Conservation Commission	Co-coordinator for Clearwater River Subbasin
9600600	Clearwater Focus Watershed/Co-corridinator	was in umbrella table
9607709	Protect and Restore Squaw & Papoose Creek Watersheds	was in umbrella table
9607711	Restore McComas Meadows/Meadow Creek Watershed	was in umbrella table
9607708	Protect and Restore the Lolo Creek	was in umbrella table

	Watershed	
9901700	Rehabilitate Lapwai Creek	was in umbrella table
9901600	Protect and Restore Big Canyon Creek Watershed	was in umbrella table
20086	Rehabilitate Newsome Creek Watershed	was in umbrella table
20084	Protect and Restore the North Lochsa Face Analysis Area Watersheds	was in umbrella table
20085	Analyse and Improve Fish Screens	was in umbrella table

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
	N/A	

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Coordinate to develop Memorandum of Understanding (MOU) between Nez Perce National Forest and Nez Perce Tribe.	a	Develop MOU to define each entities responsibilities.
		b	Review and revise MOU to avoid duplication of tasks.
2	Construct fence to protect the riparian corridor and critical spawning areas.	a	Establish location of new fence.
		b	Purchase fencing materials.
		c	Construct three miles of fence to protect riparian corridor and critical spawning areas.
3	Develop monitoring plan to monitor success of excluding cattle and the regeneration of riparian vegetation.	a	Coordinate with NPNF to compile baseline data.
		b	Compile data and correlate the data into a monitoring plan to measure success of excluding grazing effects and the regeneration of riparian vegetation.

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	12/1999	12/2000	N/A	X	10.00%
2	3/2000	7/2000	Riparian protection fence constructed	X	80.00%
3	5/2000	12/2000	Develop Monitoring Plan	X	10.00%
				Total	100.00%

Schedule constraints
Inclement weather

Completion date
2006

Section 5. Budget

FY99 project budget (BPA obligated):

FY2000 budget by line item

Item	Note	% of total	FY2000
Personnel		%44	27,860
Fringe benefits	24% Non-Tax Exempt, Perm Staff 14% Tax-Exempt, Perm Staff	%7	4,526
Supplies, materials, non-expendable property	Post-pounders, auger, office supplies.	%2	1,200
Operations & maintenance		%0	
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		%0	
NEPA costs		%0	
Construction-related support		%0	
PIT tags	# of tags:	%0	
Travel	GSA vehicle lease, perdiem, meetings	%9	5,500
Indirect costs	22.9%	%14	8950
Subcontractor		%24	15,000
Other		%0	
TOTAL BPA FY2000 BUDGET REQUEST			$63,036

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount ($)
Nez Perce National Forest	Range, Fisheries Expertise, and Administration	%2	1,000
Earth Conservation Corps/ Salmon Corps		%1	500
		%0	
		%0	
Total project cost (including BPA portion)			$64,536

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	$50,000	$50,000	$40,000	$35,000

Section 6. References

Watershed?	Reference
☐	Columbia Basin Fish and Wildlife Authority. 1997. Integrated watershed projects: The process and Criteria for Selecting Watershed Projects for the Columbia Basin Fish and Wildlife Program.
☒	Columbia River Inter-Tribal Fish Commission. 1994. Wy-Kan-Ush-Mi Wa-Kish-Wit, Spirit of the Salmon, the Columbia River Anadroumous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs, and Yakama Tribes. Volume I & II, Portland, Oregon.
☐	Nez Perce Tribe and Idaho Department of Fish and Game. 1990. clearwater River Subbasin Salmon and Steelhead Porduction Plan. Lapwai and Boise, Idaho.
☐	Nez Perce Tribe and Nez Perce National Forest, 1998. Draft Memorandum of Understanding.
☐	Nez Perce Treaty of 1855 with the United States Federal Government.
☐	Northwest Power Planning Council. 1994. Columbia River Basin Fish and Wildlife Program. Northwest Power Planning Council, Portland, Oregon.
☐	Rosgen, Dave. 1996. Applied River Morphology. Wildland Hydrology, Pagoas Springs, Colorado.
☐	Steward, Cleveland R. 1996. Monitoring and Evaluation Plan for the Nez Perce Tribal Hatchery. Nez Perce Tribe Department of Fisheries Resource Management.
☐	USDA. 1997. National Indian Forest Resource Management Act, Public Law 101-630.
☒	USDA Forest Service. 1998. South Fork Clearwater River Landscape Assessment. Volume I, Nez Perce National Forest, Idaho County, Idaho.

PART II - NARRATIVE

Section 7. Abstract

The Mill Creek Watershed is located in the South Fork Clearwater River. This watershed drains 23,325 acres, of particular importance to steelhead and westslope cutthroat trout. Supplementation of Chinook salmon by the Nez Perce Tribal Hatchery (NPTH) furthers the importance of restoration to the Nez Perce Tribe. A combination of grazing, timber harvest, and road building land management activities have altered the stream and riparian process. The overall goal of this project is to restore the physical and biological characteristics of the Mill Creek Watershed through protecting critical riparian habitat from grazing effects through fencing. This goal will assist in the restoration of Chinook salmon, steelhead trout, and resident salmonids. These goals will be accomplished by establishing a riparian protection fence, in turn allowing the riparian vegetation to grow and heal without disturbance. This riparian corridor will produce habitat for fish and wildlife, enhance cover to the stream, reduce sediment delivery, improve water temperatures, and improve water quality. A monitoring plan created in coordination with this project will measure the success of restoration activities throughout the watershed. The improvement of natural characteristics, through the outcomes of this project, will increase fish and wildlife habitat, and benefit tribal culture.

Section 8. Project description

a. Technical and/or scientific background

Mill Creek, located in the South Fork Clearwater subbasin, is a long linear watershed of particular importance to steelhead and westslope cutthroat trout. Land management activities, such as grazing, timber harvest, and road building, have altered the stream/riparian processes. Aquatic conditions within this watershed have been degraded due to these activities (USDA Forest Service, 1998).

Mill Creek has spring Chinook, steelhead, westslope cutthroat trout present in the drainage. There has also been one sighting of a bull trout. Steelhead and westslope cutthroat populations are strong within the watershed, but the watershed conditions are considered adjunct degraded habitat for spring Chinook and bull trout (USDA Forest Service, 1998). Both Chinook salmon and steelhead are listed under the Endangered Species Act (ESA) within this subbasin.

Mill Creek has been identified by the Nez Perce Tribe as a stream to be stocked with juvenile spring Chinook as part of a large-scale field test of supplementation. The primary goal of the NPTH supplementation project is to re-establish and supplement natural populations of Chinook salmon in the Clearwater subbasin until natural production has stabilized at sustainable levels. Supplementation is necessary because, without it, Chinook populations are unlikely to become re-established and self-sustaining (Steward, 1996).

The strong populations of steelhead and westslope cutthroat trout also make this an important watershed to restore. The restoration needs to focus on stream/riparian processes affected by grazing in the upper mainstem. Conserving the existing pattern of vegetation is listed as a priority (USDA Forest Service, 1998).

The mainstem of Mill Creek is predominately a B channel type, with C channels and meadow openings in the upper watershed (USDA Forest Service, 1998). B-type channels exist primarily on moderate steep to gently sloped terrain, are moderately entrenched, exhibit a "rapids" dominated bed morphology, and pool-to-pool spacing is generally 4-5 bankfull widths. C-type channels are locate in narrow wide valleys and exhibit a sequence of riffles and pools that are linked to the meander geometry of the river (Rosgen, 1996).

The riparian corridor has been altered due to management activities within the Mill Creek Watershed. Encroaching roads and grazing effects have effected and altered the riparian process. Sediment is increasingly high due to road densities (2.6 miles per square mile), which causes sediment deposit into the stream, resulting in cobble embeddedness and suspended fine sediments (USDA Forest Service, 1998).

Heavy grazing occurs within upper Mill Creek, especially around the meadow areas of the stream. The riparian corridor and bank stabilization have been heavily impacted due to cattle grazing within this watershed.

The goals and objectives our project strives toward, resemble the goals and objectives found in Wy-Kan-Ush-Mi Wa-Kish-Wit, The Columbia River Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs, and Yakama Tribes (CRITFC, 1995).

GOALS OF TRIBAL FISH RESTORAION

- Restore anadromous fishes to the rivers and streams that support the historical cultural and economic practices of the tribes.
- Emphasize strategies that rely on natural production and healthy river systems to achieve this goal.
- Protect tribal sovereignty and treaty rights.
- Reclaim the anadromous fish resource and the environment on which it depends for future generations.

Putting fish back into the rivers and streams alone are not enough to restore their populations, as they require a healthy system to return, spawn, and rear. Our proposal objectives will mitigate the problems stated above by decreasing sediment to streams and rivers, in turn restoring spawning areas; produce riparian and stream bank habitat, resulting in decreased stream temperatures, increased rearing habitat, habitat for fish and wildlife, and stabile stream banks; and excluding cattle from critical riparian and stream habitat, allowing the stream and riparian zone to grow and heal.

OBJECTIVES OF TRIBAL FISH RESTORATION

- Within 7 years, halt the declining trends in salmon, sturgeon, and lamprey populations originating upstream of Bonneville Dam.
- Within 25 years, increase the total adult salmon returns of stocks originating above Bonneville Dam to 4 million annually and in a manner that sustains natural production to support tribal commercial as well as ceremonial and subsistence harvests.
- Within 25 years, increase sturgeon and lamprey population to naturally sustainable levels that also support tribal harvest opportunities.
- Restore anadromous fishes to historical abundance in perpetuity.

The first objective states halting the declining trends in salmon and lamprey within 7 years. Cattle exclusion from riparian areas and stream banks should produce stabilization within 2 - 5 years. This will improve conditions within the watershed within 7 years of the Tribes plan.

This project proposal also protects the goal of tribal sovereignty and treaty rights. In the Treaty of 1855, the Nez Perce Tribe ceded much of their aboriginal territory to the United States in exchange for a reservation that was to serve as a permanent homeland. In that treaty, the Nez Perce Tribe reserved certain rights including, "the exclusive right of taking fish in all the streams where running through or bordering said reservations is further secured to said Indians (Nez Perce Treaty of 1855, 1855)." Thus, the government has a trust agreement to protect all tribal resources. The proposal will work toward protecting our resources, therefore, fulfilling the governments responsibilities. The project will also allow the tribe to manage our own tribal resources, which will in turn protect our sovereignty and treaty rights. This is called for in the National Indian Forest Resource Management Act (PL 101-630), which provides for the management of forested tribal trust lands (USDA, 1997).

b. Rationale and significance to Regional Programs

Production of anadromous and resident salmonids within the Mill Creek watershed are limited by habitat conditions. These conditions are addressed through a coordinated effort between the Nez Perce Tribe and the Nez Perce National Forest, as defined in the MOU developed in 1999. This project strives toward meeting the goals and objectives of the 1994 Fish and Wildlife Program (FWP) including: sharing costs with relevant parties (Nez Perce National Forest), ensuring biodiversity through conserving landscapes, ecosystems, species, and populations, habitat protection and rehabilitation, stream bank regeneration and rehabilitation, continued land management, increase egg to smolt survival, survival of fry, juvenile, and adult native anadromous and resident salmonids (Northwest Power Planning Council, 1994).

The destroyed riparian corridor and degraded banks of the Mill Creek Watershed will be reclaimed through this riparian restoration project, in turn reclaiming an environment for fish to thrive. The goals and objectives of this proposal will work toward meeting the

goals and objectives of the Fish Restoration Plan of the Tribes. Riparian restoration assists wildlife and salmonid species, at the same time helping to stabilize the aquatic environment. Riparian corridors create a vegetative column along streams and rivers,which serve as transportation routes for wildlife such as birds, deer, and elk. Re-vegetation of the riparian corridor, through natural propagation, will improve the aquatic characteristics. The addition of shade will decrease water temperature, increase stream flow, increase water depth, reduce sedimentation, stabilize stream banks, elevate water tables, increase cover for fish, and improve water quality.

This Mill Creek protection and restoration proposal, upon approval, will be an on-going "on-the-ground" watershed project, because commitment to long-term habitat improvement is crucial to restoring anadromous fish in the Clearwater River subbasin. The exclusion of grazing from critical spawning areas and the supplementation of Chinook salmon will help to restore the anadromous fisheries production capabilities within this watershed and the Clearwater River subbasin.

This project works toward meeting the Habitat Objectives in section 7.6 of the NPPC Fish and Wildlife Program. First, excluding grazing and enhancing the riparian corridor will enforce no increase in sediment input. Consequently, bank stability will increase to reach the goal of 90 percent, and water temperatures will decrease to 60 degrees Fahrenheit through shading.

c. Relationships to other projects

The Nez Perce Tribal Fisheries/Watershed Program has been actively involved in the Clearwater Sub-basin with habitat restoration projects. The following list details the relationship to this project proposal.

- Clearwater Subbasin Focus Watershed Program – Coordinate multiple jurisdictions and government agencies efforts to protect, restore, and enhance fisheries habitat in the Clearwater River subbasin. Coordinate among federal, state, and local government agencies and private landowners in cooperation with the Idaho Soil Conservation Commission Focus Program. Project development will emphasize but not be restricted to lands co-managed by federal agencies and the Nez Perce Tribe in the Clearwater River subbasin. Manage implementation projects to enhance or restore fisheries habitat in selected watersheds.
- Lolo Creek Watershed – Coordinate with Clearwater National Forest to improve spawning and rearing habitat through road obliteration/erosion control activities, coordinate with Potlatch Corporation, State of Idaho, Clearwater National Forest, and private landowners to determine riparian protection/grazing exclusion areas, off-site watering development, and cattleguard placement, and perform monitoring and evaluation of riparian areas as a result of fencing and road obliteration/erosion control.
- Squaw and Papoose Creek Watersheds – Improve spawning and rearing habitat through road obliteration/erosion control activities, and perform monitoring and evaluation of road obliteration and sediment reduction procedures.

- Lapwai Creek Watershed – Complete watershed assessment to justify further work within the watershed, and coordinate with private landowners within proposed work area.
- Big Canyon Creek Watershed – Complete watershed assessment to justify further work within the watershed, and coordinate with private landowners within proposed work area.
- McComas Meadow/Meadow Creek Watershed – Re-vegetate and restore riparian and wetland habitat through stream bank stabilization, excluding grazing effects, and groundwater monitoring.
- Meadow Creek Restoration–Idaho – Increase understanding of meadow restoration through academic graduate work by comparing low impact vs. aggressive mechanical restoration methods within Meadow Creek and Red River in the South Fork Clearwater River.
- Newsome Creek – Obliterate roads to reduce sediment delivery to the stream, and monitor channel morphology.
- North Lochsa Face – Improve spawning and rearing habitat through road obliteration/erosion control activities, and perform monitoring and evaluation of road obliteration and sediment reduction procedures.
- Fish Screens- Analyze and Improve pump and diversion screens within the 1855-treaty territory of the NPT.

All projects are located within the Clearwater River subbasin, and are consistent with the goals and objectives of the 1994 Fish and Wildlife Program (FWP). These include: sharing costs with relevant parties (NPNF), ensuring biodiversity through conserving landscapes, ecosystems, species, and populations through riparian protection, sediment reduction activities, habitat protection and rehabilitation, stream bank regeneration and rehabilitation, continue land management, increase survival of native anadromous and resident salmonids.

d. Project history (for ongoing projects)

N/A – New project

e. Proposal objectives

The overall project goal is to restore the physical and biological characteristics of the Mill Creek Watershed through protecting critical riparian habitat from grazing effects through fencing. This goal works toward meeting the goals and objectives of the tribe's Anadromous Fish Restoration Plan. The objectives that will be used to accomplish this goal are outlined below.

Objective 1: Coordinate to develop Memorandum of Understanding (MOU) between the Nez Perce Tribe (NPT) and the Nez Perce National Forest (NPNF).

PRODUCT: A cooperative working relationship will develop and each entities responsibilities are defined to avoid duplication among the agencies.

Objective 2: Construct fence to protect the riparian corridor and critical spawning areas.

PRODUCT: Approximately three miles of fence constructed to protect riparian habitat and critical spawning areas.

Objective 3: Develop monitoring plan to monitor success of excluding cattle and the regeneration of riparian habitat.

PRODUCT: Monitoring plan to measure the success of exclusion of grazing effects and future restoration projects.

f. Methods

Scope: In accomplishing the project goal: restore the physical and biological characteristics of the Mill Creek Watershed through protecting critical riparian habitat from grazing effects through fencing. This, in turn, will provide quality habitat for Chinook salmon (*Oncorhynchus tshawytscha)*, steelhead trout (*Oncorhynchus mykiss)*, and resident fish species by working with an overall watershed approach. The target to this restoration process is to exclude grazing effects on the riparian corridor, in turn giving the riparian corridor an opportunity to grow and heal. The stated objectives represent an overall watershed approach to protecting and restoring the riparian corridor and fisheries habitat. In 2000, the project will: (1) coordinate with the NPNF to develop a MOU between the NPT and NPNF to define responsibilities, and avoid duplication of tasks, (2) construct three miles of fence to protect riparian corridors and critical spawning areas, and (3) develop a monitoring plan for the restoration efforts within this watershed.

Approach: The key element to restoration planning is restoring the physical and biological characteristics within the watershed. Restoring the physical characteristics within the watershed will allow a stabile environment, which will benefit the biological conditions, in which organisms live. It is important to evaluate the local site in which the work is completed and its linkages to the overall watershed. Protecting this riparian corridor will allow for vegetation to grow and heal without disturbance from grazing effects, creating a riparian corridor. Restoring this riparian corridor will provide fish and wildlife habitat and shade to assist in cooling stream temperatures, and improve water quality.

Detailed Methodology: (lower case letters correspond to tasks)

1) Coordinate to develop Memorandum of Understanding (MOU) between Nez Perce National Forest and Nez Perce Tribe.
   (a) Continue existing MOU between NPNF and NPT, in coordination with McComas Meadow/Meadow Creek Waterhsed project. This MOU will define the responsibilities of each agency and to avoid duplication of tasks.

(b) The MOU will be reviewed by each entity, and revised to incorporate all aspects of each project.

2) Construct fence to protect the riparian corridor and critical spawning areas.
   (a) The exact location of the riparian protection fence will be mapped out by the NPT and the NPNF. This fence will protect the riparian corridor and critical spawning areas. The fence will exclude cattle from grazing in these critical areas, in turn giving the riparian area an opportunity to grow and heal without disturbance. An established riparian corridor will improve bank stabilization, provide shade, in turn lowering water temperatures, increase storage capacity, decrease sedimentation, provide fish and wildlife habitat, and improve water quality.
   (b) Fencing materials will be purchased from a sub-contractor. One mile of the fence will be pressure treated lodgepole posts and rails, and the remaining two miles will be pressure treated lodgepole posts and barbed wire.
   (c) A professional fencing crew will be hired to construct the three miles of riparian protection fence.
3) Develop a monitoring plan to monitor success of excluding cattle and the regeneration of riparian vegetation.
   (a) The NPT and the NPNF will compile all existing baseline data that was collected within the watershed, as defined in the MOU.
   (b) Data will be stored in a data base, and incorporated into a monitoring plan. This monitoring plan will define measures used to determine success of excluding grazing effects, and the regeneration of riparian vegetation. Additional potential projects will also be identified.

g. Facilities and equipment

Office space, computers, telephone, fax, photocopier, and various equipment have been purchased in past years. The following equipment will be purchased, leased or rented as follows:

- GSA vehicles – leased for use in transportation to and from the work site and associated meeting for planning and design of this project.
- Computer – owned for use in preparing MOU, design, presentations, quarterly and annual reports correlated with this project.
- Fence post auger – purchased for use in drilling fence post holes.
- Post-pounder – purchased for use in constructing fence.
- ATV- owned for use in transporting materials at the job site.
- Chainsaw – owned for used in clearing path for fence line.

h. Budget

This budget will support a Biologist to coordinate with the Forest Service in planning, designing, monitoring, and reporting. In addition, a professional field crew will be hired to construct the fence. The personnel and fringe benefit costs will cover the employee's salary and benefits offered through the NPT.

Supplies and materials costs contribute to office supplies and fence building equipment.

The travel section covers cost of leasing a GSA vehicle for transportation to and from the job site, meetings, and conferences related to this project. Per diem rates for the field crew are also incorporated into this line item.

Indirect costs of 22.9% of the budget, excluding sub-contracts, is allocated to the Nez Perce Tribe Executive Committee for the means of administration, human resources, and accounting.

Sub-contracts include gathering, preparing, and delivery of fence materials to the job site.

Section 9. Key personnel

Heidi Stubbers
Habitat Biologist
Nez Perce Tribe
1.0 FTE

Education: 1997 - B. S. – University of Dubuque, Iowa.
Majors: Environmental Science & Biology,

Current Responsibilities: Coordinate activities to include habitat, research, and production as it relates to watershed management, coordinate with cooperating agencies, work with interdisciplinary teams, inventory and evaluate habitat conditions, and coordinate riparian protection and stream restoration.

Relevant Training:

- Riparian Proper Functioning Condition Training, 1998, Bureau of Land Mgmt.
- Integrated Ecosystem Watershed Management Workshop, 1998, OSU
- Fish Screen and Passage Workshop, 1998, CBFWA
- Total Maximum Daily Load (TMDL) Workshop, 1998, Idaho DEQ
- Road Obliteration Training, 1998, USDA Forest Service

Previous Employment:

- May 1998 – present: NEZ PERCE TRIBE FISHERIES/WATERSHED
  Habitat Biologist
- Sept. 1997 – May 1998: EARTH CONSERVATION CORPS/SALMON CORPS
  Field Director
- Summers 1996 – 1997 – STATE OF IDAHO
  DIVISION OF ENVIRONMENTAL QUALITY
  Biological Technician

Expertise: Heidi has a broad educational background in environmental science and biology. Her professional experience includes a background working with habitat assessment, wildlife population counts, electrofishing, water quality testing, field

research, and habitat restoration. Her work requires knowledge of habitat protection, restoration, habitat types, and the relation between them.

Relevant Job Completions: 1) McComas Meadow water table well installation, 2) McComas Meadow fence monitoring, 3) Lolo Creek fence construction & monitoring, 4) Lolo Creek non-source watering sites, 5) Johnson Creek Restoration Review.

Ira Jones
Clearwater Subbasin Focus Coordinator/
Habitat/Watershed Manager
1.0 FTE

Education: University of Montana, Missoula, MT
Major: Wildlife
Attendance: Sept 1973 – June 1974

Current Responsibilities: Planning and implementation of Early Action Watershed Projects, analyze programs, laws, policies related to watershed management, facilitate development of criteria to identify critical fisheries habitat, develop a system to apply criteria to watershed for project development and administration, prepare and plan documents for watershed habitat coordination, provide educational presentations and workshops for watershed management and proposal development, and provide assistance to project proponents with proposal development, implementation, monitoring and assessment.

Previous Employment:

• March 1997 – present:	NEZ PERCE TRIBE FISHERIES/WATERSHED Habitat/Watershed Manager
• June 1986 – March 1997:	UNITED STATES FOREST SERVICE, REGION ONE. Tribal Government Program Manager
• Dec. 1980 – June 1986:	UNITED STATES FOREST SERVICE, REGION ONE. Facilities Manager
• July 1974 – Oct. 1979	UNITED STATES FOREST SERVICE, REGION ONE. Fire Cache Work Leader

Relevant Job Completions: 1) Coordinated National, Multi-Regional, and Regional Civil Rights Conferences. 2) Facilitated Treaty Rights workshops with host tribes and multi-government agencies. 3) Organized and conducted Tribal Relations Training primarily for management level from the U.S. Forest Service, Tribes, Bureau of Land Management, and the Bureau of Indian Affairs. 4) Introduced, implemented, and managed the Inter-Tribal Youth Practicums for careers in natural resources and leadership within the U.S. Forest Service Regions 1, 5, 9, and 10. 5) Developed an Intergovernmental Personnel Act (IPA) position to work with the Salish Kootnai College

to teach environmental science courses and develop a four-year natural science curriculum at the college. This three-year position and the program developed into a four-year accredited degree program in the fall of 1996.

We are also going to use staff from the Center for Environmental Education at Washington State University in our work within the watershed. The following individuals are the lead personnel from the university.

Shulin Chen
Department of Biological Systems Engineering, Washington State University
Matching Funds Contribution

Education: 1991 – Ph.D. Cornell University, Ithaca, NY
1981 – B.S. The Agricultural University of Hebei, Baoding, China

Current Reponsibilities/ Relevant Job Completions: Dr. Chen is in charge of both teaching and research projects for Washington State University. His teaching responsibilities include water quality, watershed management, natural systems for wastewater treatment, and aquacultural engineering. While his research projects include natural systems for agricultural wastewater treatment for USDA, a problem solving tool for mitigating the impact on water quality of management practices in small rural watersheds for USGS, wet detention pond for highway runoff control for NCHRP, and systems approach for watershed management for USDA.

Previous Employment:

- October 1995 – present — Assistant Professor, W.S.U.
- November 1992 – Sept. 1995 — Research Assistant Professor, L.S.U.
- January 1990 – Nov. 1992 — Post-doctoral Researcher, L.S.U.

Expertise:

- Dr. Chen brings an expertise in water quality and management issues. This expertise will be used to review water quality information and help to apply this data to our work within this project. He also has expertise in environmental engineering which will help us in the design of instream and riparian structures.

Darin Saul
Director, Center for Environmental Education at Washington State University
Matching Funds Contribution

Education: 1996 – Ph.D. Washington State University, Pullman, WA.
1991 – M.A. Portland State University, Portland, OR
1987 – B.A. University of Washington, Seattle, WA

Current Responsibilities/Relevant Job Completions: Dr. Saul is the Director for the Center for Environmental Education and our leasion with WSU. He is currently working on the assessment model that will be used for Watershed Assessments completed by the Nez Perce Tribe. His experience in scientific writing and past watershed management publications will be invaluable in our efforts to establish a coprehensive document.

Experience:

- Director, Center for Environmental Education. 1996 – present
- Project Manager, Developing a Research Track In General Education Curriculum. 1997 – present
- Associate Director, WSU Preservice Teacher Environmental Literacy Project. 1996 – present
- Coordinator, Environmental Projects Program 1995 – 1996
- Adjunct Faculty at WSU 1997 – present
- Instructor and Teaching assistant 1990 - 1997

Publications:

- *A Next Step for Environmental Education: Thinking Critically, Thinking Culturally.* Accepted at The Journal of Environmental Education. Submitted February 1997.
- *Paradise Creek Watershed Water Quality Management Plan.* Co-written with Bruce Davis and the Paradise Creek Management for Washington Department of Ecology.
- "Intercultural Identity in James Welch's *Fools Crow and The Indian Lawyer.*" American Indian Quarterly. Winter 1996, 1-6.

Section 10. Information/technology transfer

Information obtained from this project will be distributed through several documents. Streamnet will be used to document any relevant work completed in the watershed. Articles will be written and submitted to the Tribal Newsletter, Salmon Tales for publication.

Quarterly reports will be produced including project status, significant results, time lines, problems encountered, and upcoming planned activities. Annual reports will be published compiling all data and accomplishments achieved during the previous work seasons, and project and improvement suggestions for the upcoming years.

Congratulations!